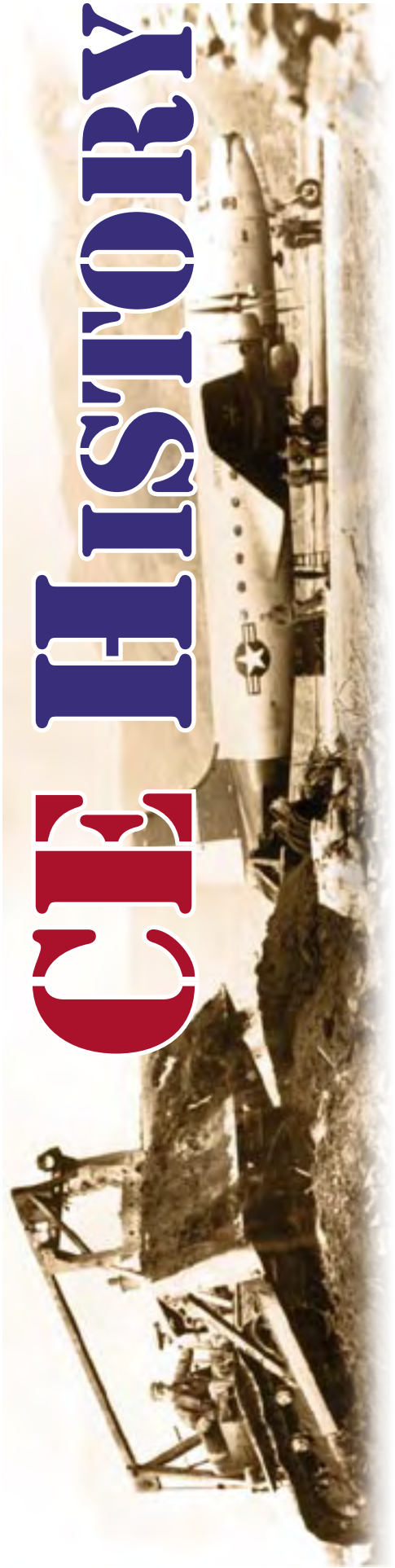

"NEARLY INDISPENSABLE": AVIATION ENGINEERS IN NORTH AFRICA

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Operation Desert Shield was not the first time Air Force engineers have operated in a desert environment. In World War II, Aviation Engineers advanced across North Africa in support of the rapidly-moving air and ground forces.

Aviation Engineers were special units formed in 1940 to construct advanced airdromes. The 800-man battalions were self-contained units that constructed, maintained, defended, and concealed airfields around the world during the war.

In 1940, Army Air Force leaders were just beginning to fully understand the importance of mobile air power. The key was the availability of airfields as close to the front lines as possible. The Aviation Engineers were tasked with providing these airfields across North Africa.

For the invasion of North Africa in November 1942, four battalions stationed in England (809th, 814th, 815th, and 817th) accompanied the assault forces at Oran. In western Morocco the 21st Engineer Aviation Regiment, the first aviation engineer unit, landed directly from the United States as did the 871st Airborne Aviation Engineer Battalion.

The battalions landed without incident and usually without their equipment. The men of the 814th walked 12 miles to their project site only to fill in holes, dig up duds, and remain idle because their heavy equipment had been appropriated by another unit after being unloaded. The ship carrying the 815th's equipment was sunk and the 809th's equipment was on a ship that had developed engine trouble two days out of England and turned back.

When the units finally began their work in earnest, the major obstacle to constructing airfields along the coasts of North Africa was not the Germans or even the Italians, but "General Mud." The engineers had landed during the rainy season. Brig Gen Donald A. Davison, Chief Engineer, Allied Force, described the construction of the airdrome at Tafaraoui, "To any aviation engineer in North Africa, the word Tafaraoui does not mean an airport alone, it means also a malignant quality of mud; something like wet concrete and of bottomless depth. We still speak of any bad type of mud as Tafaraoui."

Effective air power in North Africa required all-weather airdromes. Gen James H. Doolittle, Commander, 12th Air Force, needed a dry base close to the front for his heavy bombers. General Davison found a large sandy expanse near Biskra, Algeria, deep in the Sahara. Because the conventional battalions were already busy on other projects, he called in the airborne engineers. Troop transport planes carried the engineers and their specially designed miniature equipment to Biskra, almost a thousand miles. They arrived on the evening of 13 December and began work immediately. Twenty-four hours later, the first B-17 arrived from Oran. The bombers were out of the mud and used the base until the following March, when spring winds blew sand in such quantities as to make operations impossible.

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Airborne Aviation Engineers used equipment such as this bulldozer and sheep's foot to construct the base at Biskra.

Through active planning and cooperation between engineer and planner, the Aviation Engineers were almost always at the front lines, or sometimes even ahead of them. One night General Davison was looking for the engineers of "B" company, 814th Battalion, when he was stopped by sentries from the 1st Armored Division, "They stopped me and asked me if I knew I was going out in front of their patrols. I said, 'No that I didn't know that but I wanted to ask them one question -- had a certain engineer company gone through and were they out in front?' and they said 'Yes, if you mean those damn fools who wouldn't pay any attention to us and took those big machines out, we think they are about 10 or 15 miles down the road.' and I said, 'That was what I wanted to know.' I found "B" company dug in with its defensive weapons in place and already at work. It was by keeping in touch with the planning . . . that we were able to do this."

Gen Carl A. Spaatz

The base at Bone, the easternmost port available to the Allies, was perhaps the most difficult but probably the most rewarding to build. The only possible site for the all-weather airfield was a delta in the Seybouse River mouth. But the area was pure mud. The solution was to use sand available along the coast. Unfortunately, the sand dunes were on the opposite side of the river from the construction site. The men constructed a causeway across the river, a roadway on the delta, and began to bring in sand from the dunes. Although the site was under Axis air attack, rain was the enemy the engineers feared most. A rare dry spell allowed the engineers to bring the sand across and finish the runway just hours before rain washed away the causeway.

Shortly after completing the runway at Bone, the engineers received the most gratifying of rewards. A B-26 returning from a mission had become lost and was about to run out of fuel. While headed for a ditching in the Mediterranean Sea, the pilot happened to glance down and see the "longest runway he had seen in North Africa" at Bone. He made one sharp turn and landed without enough gas left to taxi his plane off the runway.

The Aviation Engineers proved themselves in North Africa. By the end of the campaign the ten battalions in theater had built or improved 129 airdromes. Gen Carl Spaatz, commander of the Northwest African Air Forces, stated, "the Aviation Engineers have become as nearly indispensable to the Army Air Force as is possible to ascribe to any single branch thereof."

The close working relationship forged between the engineers and the fliers in North Africa continued in Italy and was a key to the Allies' success on the European continent.